

MM4:Feeding the World Sustainably and Responsibly



Micro-Module 4: Feeding the World Sustainably and Responsibly

Experimentation and Exploration

Lesson 4: From Farm to Fork: The Steps of Food Value Chains

Subjects: Art and Design, Agricultural Science, CPSE, Home Economics, SPHE

Lesson Title and Summary: From Farm to Fork: The Steps of Food Value Chains

Each day our plates are filled with foods that come to us from farmers and producers from every country and continent in the world. The supply chains and value chains behind our food stretch across the globe. In this lesson we'll explore the paths our food travels, learn more about farming, harvesting, production, packaging, and the transport of our food and try to understand the true cost of our food. On top of what we pay at the till, is there a further cost that mother nature or the planet's farmers and workers have to bear on our behalf?

Vocabulary: Value Chains, Farming, Harvesting, Food Production, Packaging, External Costs of Production

In this lesson, the learner will:

- Identify and describe the various stages of a value chain
- Appreciate the role various stakeholders play within a value chain
- Exercise critical thinking & decision making
- Evaluate the environmental, social and economic impacts in value chains
- Engage in pair and group work

Materials

- Worksheet 1: Value Chain Definitions
- Worksheet 2: Bananas and the Steps of a Value Chain
- Worksheet 3: Value Chains in the Media
- Pens, paper and blue tack
- Internet access
- Blackboard/Whiteboard and chalk/white board markers



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ACTIVITY INSTRUCTIONS

Activity 1: Value Chain Definitions (15 mins)

1. Divide the class up into small groups/teams of 4-5 learners
2. Distribute Worksheet 1: Value Chain Definitions
3. Ask the groups to research and define each of the three concepts.
4. Discuss the definitions and attempt to explain the difference between an external cost and a hidden cost.

Activity 2: Bananas and the Steps of the Value Chain Defined (15 mins)

1. Distribute Worksheet 2: Bananas and the Steps of a Value Chain
2. As a class, watch the video “How Do Bananas Grow and End Up in the Store?” [3:08 mins]
3. While watching the video, ask the learners to make notes using the worksheet about what they are hearing and seeing and the possible stages of the value chain.
4. Discuss as a class what possible steps might exist for other foods, for example - grapes, apples, milk, a hamburger?

Activity 3: Value Chains in the Media (20 mins)

1. Continue working in groups and distribute Worksheet 3: Value Chains in the Media to the class
2. Allocate each team with a different newspaper article to review.
3. Assist the learners to work through the questions and requirements of the worksheet.
4. Class discussion on their findings

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

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EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, run Activity 1 as a flipped classroom and have the learners briefly discuss their definitions at the beginning of the lesson.

Extension: For a longer lesson, extend Activity 2 by extending the discussion in step 5 by defining more value chains for other everyday foods learners have eaten in the past week. Have learners choose two articles to read in Activity 3.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

- How do Bananas Grow and End Up in the Store? (3:08mins) <https://www.youtube.com/watch?v=SgFKfVfghpg>
- Supermarkets wasting 200,000 tonnes of food that could go to needy, says charities: <https://www.theguardian.com/business/2022/feb/22/supermarkets-wasting-200000-tonnes-of-food-that-could-go-to-needy-say-charities>
- Warning that coffee could disappear from shelves by 2050 due to climate change: <https://www.irishexaminer.com/news/arid-41081876.html>
- Sustainability of global coffee production 'at risk' - report: https://www.rte.ie/news/2019/0117/1023727-coffee_at_risk/
- Container ship begins exit from Suez Canal 106 days after getting stuck: <https://www.rte.ie/news/world/2021/0707/1233615-suez-canal/>
- In the year to end child labour, COVID wreaks havoc: The pandemic has fuelled trafficking of children to work in mines and cocoa plantations: <https://www.irishtimes.com/news/world/in-the-year-to-end-child-labour-covid-wreaks-havoc-1.4762320>
- Mars, Nestle, and Hershey to face child slavery lawsuit in US: <https://www.theguardian.com/global-development/2021/feb/12/mars-nestle-and-hershey-to-face-landmark-child-slavery-lawsuit-in-us>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

Visit two shops in your area - one supermarket and one small local food shop (butcher, bakery, specialty food store/ fruit shop).

Find out how many deliveries a week the store receives and from how many different suppliers. How many products does each delivery company provide to the store or shop. Find out where these trucks come from and attempt to calculate their Irish transport miles per week for each store.

MM4:L4 WS VALUE CHAIN DEFINITIONS

2 ZERO HUNGER



As a group, write your own definition or description for each of the terms:

What is a Value Chain?

What is an External Cost?

What is a Hidden Cost?

What is the difference between an external cost and a hidden cost?

MM4: L4 WS BANANAS & VALUE CHAINS STAGES

2 ZERO HUNGER



Take notes during the video and attempt to identify the activities for each of the following stages of the value chain. Identify who carries out this work and where this activity takes place.

Stage 1: Farming: What is involved? Who does it?

Stage 2: Harvesting: What is involved? Who does it?

Stage 3: Shipping: What is involved? Who does it?

Stage 4: Production: What is involved? Who does it?

MM4: L4 WS BANANAS & VALUE CHAINS STAGES

2 ZERO HUNGER



Take notes during the video and attempt to identify the activities for each of the following stages of the value chain. Identify who carries out this work and where this activity takes place.

Stage 5: Packaging: What is involved? Who does it?

Stage 6: Selling & Consuming (and waste disposal):

MM4: L4 WS VALUE CHAINS IN THE MEDIA

2 ZERO HUNGER



You will be allocated a media article. Read the article and answer the following questions:

Which stage of the food value chain does the article relate to?

What impact is this issue having?

Is there an impact for the consumer? for farmers? for workers? for the food company/brand?

Who is paying the cost or price of this problem?

Who, if anyone, is solving the issue?

MM4: L4 WS VALUE CHAINS IN THE MEDIA

2 ZERO HUNGER



Article 1:

Supermarkets wasting 200,000 tonnes of food that could go to needy, says charities: <https://www.theguardian.com/business/2022/feb/22/supermarkets-wasting-200000-tonnes-of-food-that-could-go-to-needy-say-charities>

Article 2:

Warning that coffee could disappear from shelves by 2050 due to climate change: <https://www.irishexaminer.com/news/arid-41081876.html>

or

Sustainability of global coffee production 'at risk' - report: https://www.rte.ie/news/2019/0117/1023727-coffee_at_risk/

Article 3:

Container ship begins exit from Suez Canal 106 days after getting stuck: <https://www.rte.ie/news/world/2021/0707/1233615-suez-canal/>

Article 4:

In the year to end child labour, COVID wreaks havoc: The pandemic has fuelled trafficking of children to work in mines and cocoa plantations: <https://www.irishtimes.com/news/world/in-the-year-to-end-child-labour-covid-wreaks-havoc-1.4762320>

or

Mars, Nestle, and Hershey to face child slavery lawsuit in US: <https://www.theguardian.com/global-development/2021/feb/12/mars-nestle-and-hershey-to-face-landmark-child-slavery-lawsuit-in-us>